

From: ["Mohr, Mindy" <Mindy>](#)
To: [Williams](#)
["Laura; Romero"](#)
[David](#)
CC: ["Bahrman, Sarah" <Bahrman.Sarah@epa.gov>](#)
Date: 7/9/2014 10:40:46 AM
Subject: RE: draft Hot Topic - Brine/ Oil Pipeline leak near Fort Berthold intake, Missouri River

[REDACTED]

Mindy Mohr
Tribal Liaison
303-312-6525 or toll free 1-800-227-8917
mohr.mindy@epa.gov
FAX 1-877-876-9191

From: Williams, Laura
Sent: Wednesday, July 09, 2014 11:40 AM
To: Mohr, Mindy; Romero, David
Cc: Bahrman, Sarah
Subject: RE: draft Hot Topic - Brine/ Oil Pipeline leak near Fort Berthold intake, Missouri River

[REDACTED]

From: Mohr, Mindy
Sent: Wednesday, July 09, 2014 11:37 AM
To: Romero, David; Williams, Laura
Cc: Bahrman, Sarah
Subject: RE: draft Hot Topic - Brine/ Oil Pipeline leak near Fort Berthold intake, Missouri River

Thank you both,
Mindy

Mindy Mohr

Tribal Liaison
303-312-6525 or toll free 1-800-227-8917
mohr.mindy@epa.gov
FAX 1-877-876-9191

From: Romero, David
Sent: Wednesday, July 09, 2014 11:23 AM
To: Williams, Laura; Mohr, Mindy
Subject: RE: draft Hot Topic - Brine/ Oil Pipeline leak near Fort Berthold intake, Missouri River

[REDACTED]

From: Williams, Laura
Sent: Wednesday, July 09, 2014 11:07 AM
To: Romero, David
Cc: Ostrander, David
Subject: FW: draft Hot Topic - Brine/ Oil Pipeline leak near Fort Berthold intake, Missouri River

[REDACTED]

From: Mohr, Mindy
Sent: Wednesday, July 09, 2014 10:59 AM
To: Williams, Laura
Subject: FW: draft Hot Topic - Brine/ Oil Pipeline leak near Fort Berthold intake, Missouri River

[REDACTED]

Mindy Mohr
Tribal Liaison
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mohr.mindy@epa.gov
FAX 1-877-876-9191

From: Mohr, Mindy
Sent: Wednesday, July 09, 2014 10:40 AM
To: Bahrman, Sarah
Cc: Crosby, Jake; Kahn, Lisa; Gindelberger, Jim; Copeland, Michael; Giese, Andrea

Subject: draft Hot Topic - Brine/ Oil Pipeline leak near Fort Berthold intake, Missouri River

[REDACTED]

[REDACTED]

Mindy Mohr
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FAX 1-877-876-9191

From: ["Hoskie, Sadie" <Sadie>](#)
To: [Lucas](#)
[Debra](#)
CC: ["Bahrman, Sarah" <Bahrman.Sarah@epa.gov>](#)
["Mohr, Mindy" <Mohr.Mindy@epa.gov>](#)
Date: 7/9/2014 11:06:23 AM
Subject: Fw: draft Hot Topic - Brine/ Oil Pipeline leak near Fort Berthold intake, Missouri River
Attachments: [Hot.Topic.DW.Fort.Berthold.Spill.docx](#)

[REDACTED]

From: Mohr, Mindy
Sent: Wednesday, July 9, 2014 12:00:56 PM
To: Hoskie, Sadie
Cc: Bahrman, Sarah
Subject: RE: draft Hot Topic - Brine/ Oil Pipeline leak near Fort Berthold intake, Missouri River

[REDACTED]

Mindy

Mindy Mohr
Tribal Liaison
303-312-6525 or toll free 1-800-227-8917
mohr.mindy@epa.gov
FAX 1-877-876-9191

From: Hoskie, Sadie
Sent: Wednesday, July 09, 2014 11:53 AM
To: Mohr, Mindy
Cc: Bahrman, Sarah
Subject: RE: draft Hot Topic - Brine/ Oil Pipeline leak near Fort Berthold intake, Missouri River

[REDACTED]

From: Mohr, Mindy
Sent: Wednesday, July 09, 2014 11:40 AM
To: Hoskie, Sadie
Cc: Bahrman, Sarah
Subject: FW: draft Hot Topic - Brine/ Oil Pipeline leak near Fort Berthold intake, Missouri River

Hi Sadie,

[REDACTED]

Mindy

Mindy Mohr
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FAX 1-877-876-9191

From: Mohr, Mindy
Sent: Wednesday, July 09, 2014 10:40 AM
To: Bahrman, Sarah
Cc: Crosby, Jake; Kahn, Lisa; Gindelberger, Jim; Copeland, Michael; Giese, Andrea
Subject: draft Hot Topic - Brine/ Oil Pipeline leak near Fort Berthold intake, Missouri River

[REDACTED]

[REDACTED]

Mindy Mohr

Tribal Liaison

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mohr.mindy@epa.gov

FAX 1-877-876-9191

From: ["Bahrman, Sarah" </O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP \(FYDIBOHF23SPDLT\)/CN=RECIPIENTS/CN=1D493CF492ED4FC0BE275A699826A64C-BAHRMAN, SARAH>](#)
To: [Hoskie](#)
["Sadie, Mohr"](#)
[Mindy](#)
CC:
Date: 7/9/2014 12:06:43 PM
Subject: Re: draft Hot Topic - Brine/ Oil Pipeline leak near Fort Berthold intake, Missouri River

Hi Mindy-

[REDACTED]

From: Hoskie, Sadie
Sent: Wednesday, July 9, 2014 11:46:47 AM
To: Mohr, Mindy
Cc: Bahrman, Sarah
Subject: RE: draft Hot Topic - Brine/ Oil Pipeline leak near Fort Berthold intake, Missouri River

[REDACTED]

From: Mohr, Mindy
Sent: Wednesday, July 09, 2014 11:40 AM
To: Hoskie, Sadie
Cc: Bahrman, Sarah
Subject: FW: draft Hot Topic - Brine/ Oil Pipeline leak near Fort Berthold intake, Missouri River

[REDACTED]

[REDACTED]

Mindy

Mindy Mohr
Tribal Liaison
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mohr.mindy@epa.gov
FAX 1-877-876-9191

From: Mohr, Mindy
Sent: Wednesday, July 09, 2014 10:40 AM
To: Bahrman, Sarah
Cc: Crosby, Jake; Kahn, Lisa; Gindelberger, Jim; Copeland, Michael; Giese, Andrea
Subject: draft Hot Topic - Brine/ Oil Pipeline leak near Fort Berthold intake, Missouri River

[REDACTED]

[REDACTED]

Mindy Mohr
Tribal Liaison
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mohr.mindy@epa.gov
FAX 1-877-876-9191

From: ["Mohr, Mindy" <Mindy>](#)
To: [Bahrman](#)
[Sarah](#)
CC: ["Kahn, Lisa" <Kahn.Lisa@epa.gov>](#)
["Copeland, Michael" <Copeland.Michael@epa.gov>](#)
Date: 7/9/2014 12:02:48 PM
Subject: call from Greg Wavra, ND

Hi Sarah,

Greg called a few minutes after finishing a meeting with Pete Stevenson, the OSC that Region 8 sent up. He said Pete was going up to the site of the leaking pipeline valve.

Greg looked at a map of the spill area and said there are no ND-regulated systems pulling water from that area, which is good news. He did not have any concrete information on sampling that's been conducted, even after talking to Kris Roberts from ND DOH earlier today. Greg suggested touching base with Pete after he learns more.

Mindy

Mindy Mohr
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From: ["Bahrman, Sarah" </O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE:GROUP \(FYDIBOHF23SPDLT\)/CN=RECIPIENTS/CN=1D493CF492ED4FC0BE275A699826A64C-BAHRMAN,SARAH>](mailto:)

To: Mylott
Richard.Mohr
Mindy.McClain-Vanderpool
Lisa.McGrath
Shaun.Cantor
Howard.Card
Joan.Ostrander
David.Williams
Laura.Stevenson
Peter.Romero
David.Morales
Monica.Mitre
Alfreda.Phillips
Gregory.Hestmark
Martin.Videtich
Callie.Thomas
Deb.Hoskie
Sadie

CC:

Date: 7/10/2014 8:09:43 AM

Subject: RE: AP: Saltwater leak alters water supply for 1 ND town

Hi all –

Jack Sorum, a drinking water treatment engineer with Indian Health Service, is on site in Mandaree this morning to evaluate the impact to the drinking water intake, what samples have been or should be collected in that area, and the status of the water supply. Jack has Pete Stevenson's cell phone number so they can coordinate.

I will plan to send an update later this morning once we have more information. Please let me know if you have any questions.

Thanks,

Sarah E. Bahrman | Unit Chief, Drinking Water | U.S. Environmental Protection Agency - Region 8
(p) 303.312.6243 | (c) 303.903.8515 | (f) 877.876.9101

From: Mylott, Richard

Sent: Wednesday, July 09, 2014 4:27 PM

To: Bahrman, Sarah; Mohr, Mindy; McClain-Vanderpool, Lisa; McGrath, Shaun; Cantor, Howard; Card, Joan; Ostrander, David; Williams, Laura; Stevenson, Peter; Romero, David; Morales, Monica; Mitre, Alfreda; Phillips, Gregory; Hestmark, Martin

Subject: AP: Saltwater leak alters water supply for 1 ND town

Fyi.

Saltwater leak alters water supply for 1 ND town

By Associated Press July 9 at 5:31 PM

MANDAREE, N.D. — Tribal leaders switched to an alternative source of water Wednesday for one town on an American Indian reservation in North Dakota following a substantial leak from a saltwater pipeline.

Kris Roberts, an environmental geologist with the North Dakota Health Department, said the spill was reported Tuesday but officials did not have any information on volumes or if the brine had reached Bear Den Bay, a tributary to Lake Sakakawea. The lake, a reservoir of the Missouri River, provides drinking water to several communities on the Fort Berthold Indian Reservation, occupied by the Mandan, Hidatsa and Arikara tribes in the heart of North Dakota's booming oil patch.

Saltwater is an unwanted byproduct of oil and natural gas drilling that can be 20 times saltier than ocean water.

Three Affiliated Tribes Chairman Tex Hall said in a statement that "there are no specific concerns over the water safety" but that tribal officials closed the water intake to Mandaree as a precaution without elaborating on what steps were taken. Hall said the briny water did not appear to have reached Lake Sakakawea.

Houston-based Crestwood Midstream Services Inc., owner of the pipeline, said in a statement Wednesday that the spill was contained and cleanup was underway. The company said it was investigating the cause of the leak but would not comment beyond its statement.

The federal Environmental Protection Agency said an investigator was heading to the site Wednesday afternoon.

Roberts said damage from the toxic spill could be seen Wednesday.

"We've got dead trees, dead grasses, dead bushes, dying bushes," Roberts said.

Karolin Rockvoy, a McKenzine County Emergency manager, said the spill appeared to have gone undetected for some time.

“Looking at vegetation, it didn’t happen yesterday,” she said. “I can guarantee you that.”

The number of saltwater spills in North Dakota has grown with the state’s soaring oil production.

North Dakota produced 25.5 million barrels of briny water in 2012, the latest figures available. A barrel is 42 gallons. There were 141 pipeline leaks reported in North Dakota in 2012, 99 of which spilled about 8,000 barrels of the saltwater. About 6,150 barrels of the spilled saltwater was recovered, state regulators said.

In 2006, a broken oil pipeline belched more than a million gallons of saltwater into a northwestern North Dakota creek, aquifer and pond. The cleanup efforts are ongoing at that site, which has been called the worst environmental disaster in state history.

The ruptured pipeline allowed briny water to spew unnoticed for weeks into a tributary of the Yellowstone River near Alexander and caused a massive die-off of fish, turtles and plants.

That spill came during the infancy of North Dakota’s oil boom. Now, a network of saltwater pipelines extends to hundreds of disposal wells in western North Dakota, where the briny water is pumped underground for permanent storage.

Proposed legislation to mandate flow meters and cutoff switches on such lines was overwhelmingly rejected last year in the Legislature.

From: ["Bahrman, Sarah" </O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE:GROUP \(FYDIBOHF23SPDLT\)/CN=RECIPIENTS/CN=1D493CF492ED4FC0BE275A699826A64C-BAHRMAN.SARAH>](mailto:Bahrman.Sarah@ihs.gov)
To: [Rohlfs](mailto:Brent.Rohlfs@ihs.gov)
["Brent \ \(IHS/ABR/OEH\)" <Brent.Rohlfs@ihs.gov>](mailto:Brent.Rohlfs@ihs.gov)
CC:
Date: 7/10/2014 8:10:53 AM
Subject: RE:

Thanks! I talked to Jack right now and luckily he's out doing a survey in Mandaree this morning so he's going to get more info about the spill and impacts to the water supply.

Sarah E. Bahrman | Unit Chief, Drinking Water | U.S. Environmental Protection Agency - Region 8
(p) 303.312.6243 | (c) 303.903.8515 | (f) 877.876.9101

From: Rohlfs, Brent (IHS/ABR/OEH) [mailto:Brent.Rohlfs@ihs.gov]
Sent: Thursday, July 10, 2014 6:39 AM
To: Bahrman, Sarah; Mohr, Mindy
Subject:

Jack Cell – 701-720-9180

Brent D. Rohlfs, PE
Deputy Director, Division of Sanitation Facilities Construction
USPHS, Great Plains Area Indian Health Service
115 4th Ave, SE, Room 309
Aberdeen, SD 57401
(605) 226-7600 Office
(605) 226-7689 Fax

From: ["Bahrman, Sarah" </O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE:GROUP \(FYDIBOHF23SPDLT\)/CN=RECIPIENTS/CN=1D493CF492ED4FC0BE275A699826A64C-BAHRMAN,SARAH>](mailto:)
To: [Mohr](#)
[Mindy](#)
CC:
Date: 7/10/2014 8:19:58 AM
Subject: RE: AP: Saltwater leak alters water supply for 1 ND town

Good idea – thanks!

Sarah E. Bahrman | Unit Chief, Drinking Water | U.S. Environmental Protection Agency - Region 8
(p) 303.312.6243 | (c) 303.903.8515 | (f) 877.876.9101

From: Mohr, Mindy
Sent: Thursday, July 10, 2014 8:15 AM
To: Bahrman, Sarah
Subject: RE: AP: Saltwater leak alters water supply for 1 ND town

Sarah, are you comfortable if I forward this to R8 Drinking Water so everyone knows the status? Also wondering about Bert Garcia's group?

Mindy Mohr
Tribal Liaison
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mohr.mindy@epa.gov
FAX 1-877-876-9191

From: Bahrman, Sarah
Sent: Thursday, July 10, 2014 8:10 AM
To: Mylott, Richard; Mohr, Mindy; McClain-Vanderpool, Lisa; McGrath, Shaun; Cantor, Howard; Card, Joan; Ostrander, David; Williams, Laura; Stevenson, Peter; Romero, David; Morales, Monica; Mitre, Alfreda; Phillips, Gregory; Hestmark, Martin; Videtich, Callie; Thomas, Deb; Hoskie, Sadie
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Thanks,
Sarah

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From: Mylott, Richard

Sent: Wednesday, July 09, 2014 4:27 PM

To: Bahrman, Sarah; Mohr, Mindy; McClain-Vanderpool, Lisa; McGrath, Shaun; Cantor, Howard; Card, Joan; Ostrander, David; Williams, Laura; Stevenson, Peter; Romero, David; Morales, Monica; Mitre, Alfreda; Phillips, Gregory; Hestmark, Martin

Subject: AP: Saltwater leak alters water supply for 1 ND town

Fyi.

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Proposed legislation to mandate flow meters and cutoff switches on such lines was overwhelmingly rejected last year in the Legislature.

From: ["Merida, Mario" <Mario>](#)
To: [Mohr](#)
[Mindy;Pardue-Welch](#)
[Kimberly;Hofstader](#)
[Olive;Brainich](#)
[Kathelene;Minter](#)
[Jill](#)
CC: ["Bahrman, Sarah" <Bahrman.Sarah@epa.gov>](#)
Date: 7/10/2014 7:58:18 AM
Subject: RE: AP: Saltwater leak alters water supply for 1 ND town

Thanks, Mindy.

As per my (seconds prior!) note to you, this incident is also now in the news.

See: <http://www.nbcnews.com/#/news/us-news/million-gallons-saltwater-leaks-north-dakota-pipeline-n152451>

Mario

From: Mohr, Mindy
Sent: Thursday, July 10, 2014 8:56 AM
To: Merida, Mario; Pardue-Welch, Kimberly; Hofstader, Olive; Brainich, Kathelene; Minter, Jill
Subject: FW: AP: Saltwater leak alters water supply for 1 ND town

fyi

From: Bahrman, Sarah
Sent: Thursday, July 10, 2014 8:10 AM
To: Mylott, Richard; Mohr, Mindy; McClain-Vanderpool, Lisa; McGrath, Shaun; Cantor, Howard; Card, Joan; Ostrander, David; Williams, Laura; Stevenson, Peter; Romero, David; Morales, Monica; Mitre, Alfreda; Phillips, Gregory; Hestmark, Martin; Videtich, Callie; Thomas, Deb; Hoskie, Sadie
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Sarah

Sarah E. Bahrman | Unit Chief, Drinking Water | U.S. Environmental Protection Agency - Region 8
(p) 303.312.6243 | (c) 303.903.8515 | (f) 877.876.9101

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From: ["Mohr, Mindy" <Mindy>](#)
To: [Bahrman](#)
[Sarah](#)
CC:
Date: 7/10/2014 7:58:41 AM
Subject: FW: Fort Berthold water in the news

Hey Sarah, I sent your update to Kimberly and her folks just now.

This article says a million gallons, and that Aero is a subsidiary of Crestwood.

Mindy Mohr
Tribal Liaison
303-312-6525 or toll free 1-800-227-8917
mohr.mindy@epa.gov
FAX 1-877-876-9191

From: Merida, Mario
Sent: Thursday, July 10, 2014 8:55 AM
To: Griese, Andrea; Mohr, Mindy
Cc: Pardue-Welch, Kimberly
Subject: Fort Berthold water in the news

I just saw this report.

<http://www.nbcnews.com/#/news/us-news/million-gallons-saltwater-leaks-north-dakota-pipeline-n152451>
C

Any additional info?

Thanks!

Mario

Mario Mérida

Environmental Protection Specialist
Drinking Water Enforcement Team (8ENF-W)
U.S. Environmental Protection Agency - Region 8
1595 Wynkoop Street
Denver, CO 80202

Tel: 303-312-6297
Fax: 303-312-7518

From: ["Romero, David" <David>](#)

To: [Stavnes](#)

[Sandra;Mylott](#)

[Richard;Bahrman](#)

[Sarah;Mohr](#)

[Mindy;Hestmark](#)

[Martin;Ostrander](#)

[David](#)

CC:

Date: 7/10/2014 8:48:30 AM

Subject: FW: Arrow Pipeline Spill, aka Aero Pipeline Spill, akaCrestwood Midstream Partners Pipeline Spill

[REDACTED]

From: Stevenson, Peter

Sent: Thursday, July 10, 2014 6:44 AM

To: Ostrander, David; Williams, Laura; Romero, David

Subject: Arrow Pipeline Spill, aka Aero Pipeline Spill, aka Crestwood Midstream Partners Pipeline Spill

[REDACTED]

[REDACTED]

[REDACTED]

From: ["Pfeiffer, Tricia" <Tricia>](mailto:Tricia@epa.gov)
To: dprice@mhanation.com
CC: ["Huff, Blake" <Huff.Blake@epa.gov>](mailto:Huff.Blake@epa.gov)
["Bahrman, Sarah" <Bahrman.Sarah@epa.gov>](mailto:Bahrman.Sarah@epa.gov)
["Oberley, Gregory" <Oberley.Gregory@epa.gov>](mailto:Oberley.Gregory@epa.gov)
["Copeland, Michael" <Copeland.Michael@epa.gov>](mailto:Copeland.Michael@epa.gov)
Date: 7/10/2014 9:24:43 AM
Subject: RE: Saltwater leak on Fort Berthold reservation-PWS concern

Dana,

Thanks for the informative discussion this morning. My understanding is that over 1,000,000 gallons of produced water spilled into Bear Den Creek--is this correct? (Note: Bear Den Creek has a surface PWS intake for the at mouth of the Bear Den Creek)

Can you find out the following info:

1. Was the Environmental Tribal Department notified immediately? Within an hour of the discovery?
2. Who notified the Tribe: State or Operator
3. I understand the NDDOH is collecting samples: where and what are they analyzing for?
4. Can I get the Lat/Long for the spill site?

Tricia Pfeiffer
Environmental Engineer
US EPA Region 8 Watershed & Aquifer Protection Unit
Phone: (303) 312-6271
Fax: (303) 312-7150

<http://www.epa.gov/region8/ecosystems/>

US EPA Region 8
1595 Wynkoop Street
Mail Code 8EP-EPR

Denver, Colorado 80202

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-----Original Message-----

From: Dana Price [mailto:dprice@mhanation.com]

Sent: Thursday, July 10, 2014 10:05 AM

To: Pfeiffer, Tricia

Subject: RE: Saltwater leak on Fort Berthold reservation

Yes we were contacted. I called you yesterday and left a voicemail in RE: the incident. I also told Blake as well.

Dana Price

TAT Environmental/EPA

Water Quality Coordinator

701-627-4569 Office

701-627-2917 Fax

701-421-5608 Cell

dprice@mhanation.com

From: Pfeiffer, Tricia [Pfeiffer.Tricia@epa.gov]
Sent: Wednesday, July 09, 2014 6:17 PM
To: Anthony Ranalli; Joel Galloway; Vining, Kevin; Dana Price; Edmund Baker
Cc: Huff, Blake
Subject: FW: Saltwater leak on Fort Berthold reservation

Edmund,

Did the Environmental Tribal Department get contacted about the incident?

Tricia Pfeiffer
Environmental Engineer
US EPA Region 8 Watershed & Aquifer Protection Unit
Phone: (303) 312-6271
Fax: (303) 312-7150

<http://www.epa.gov/region8/ecosystems/>

US EPA Region 8
1595 Wynkoop Street
Mail Code 8EP-EPR
Denver, Colorado 80202

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From: Russell, Carol
Sent: Wednesday, July 09, 2014 11:49 AM
To: Pfeiffer, Tricia

Cc: Bloom, Judy

Subject: Saltwater leak on Fort Berthold reservation

Saltwater leak on Fort Berthold reservation

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2014-07-08T23:34:00ZSaltwater leak on Fort Berthold reservationThe Associated PressThe Associated Press

13 hours ago • Associated Press

BISMARCK, N.D. — The North Dakota Department of Health says a saltwater pipeline has leaked on the Fort Berthold Indian Reservation.

Kris Roberts is an environmental geologist with the department. He says officials were notified of the leak around 11:30 a.m. Tuesday. Crestwood Midstream Services owns the pipeline.

Roberts says the department isn't sure how much saltwater has leaked, what caused the leak or when it began.

He said late Tuesday that the company is using containment berm systems but the brine is not completely contained.

Attempts to reach a company spokeswoman were not immediately successful late Tuesday

The leak is on the southeast side of Bear Den Bay, about 30 miles east of Watford City.

Saltwater is also called brine. It is a byproduct of oil production.

From: ["Bahrman, Sarah" </O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE:GROUP \(FYDIBOHF23SPDLT\)/CN=RECIPIENTS/CN=1D493CF492ED4FC0BE275A699826A64C-BAHRMAN.SARAH>](#)
To: [Pfeiffer](#)
[Tricia](#);
CC:
Date: 7/10/2014 11:01:44 AM
Subject: FW: Arrow Pipeline Spill, aka Aero Pipeline Spill, akaCrestwood Midstream Partners Pipeline Spill

Sarah E. Bahrman | Unit Chief, Drinking Water | U.S. Environmental Protection Agency - Region 8
(p) 303.312.6243 | (c) 303.903.8515 | (f) 877.876.9101

From: Romero, David
Sent: Thursday, July 10, 2014 9:49 AM
To: Stavnes, Sandra; Mylott, Richard; Bahrman, Sarah; Mohr, Mindy; Hestmark, Martin; Ostrander, David
Subject: FW: Arrow Pipeline Spill, aka Aero Pipeline Spill, aka Crestwood Midstream Partners Pipeline Spill

[REDACTED]

From: Stevenson, Peter
Sent: Thursday, July 10, 2014 6:44 AM
To: Ostrander, David; Williams, Laura; Romero, David
Subject: Arrow Pipeline Spill, aka Aero Pipeline Spill, aka Crestwood Midstream Partners Pipeline Spill

[REDACTED]

[REDACTED]

[REDACTED]

From: ["Bahrman, Sarah" </O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP \(FYDIBOHF23SPDLT\)/CN=RECIPIENTS/CN=1D493CF492ED4FC0BE275A699826A64C-BAHRMAN, SARAH>](#)
To: [Pfeiffer](#)
[Tricia](#)
CC:
Date: 7/10/2014 11:23:01 AM
Subject: RE: Saltwater leak on Fort Berthold reservation-PWS concern

Hi Trish -
I've gotten three calls about this
1) Joletta Bird Bear called yesterday concerned about the spill. She hadn't heard whether the drinking water in Mandaree was safe, and wanted to know from EPA. I called her back yesterday to tell her what I knew at the end of the day.
2) Roger Bird Bear called yesterday afternoon. He wanted to know what EPA's role was during a spill and how to report it. I gave him the 1-800 spill line.
3) Citizen in Standing Rock (called from the hospital) - wanted to know how far down the spill had reached, what was being tested in Bismarck, and if we were concerned about impacts in Standing Rock. I said at this time we were not, and I referred her to NDDOH for info about Bismarck.

Sarah E. Bahrman | Unit Chief, Drinking Water | U.S. Environmental Protection Agency - Region 8
(p) 303.312.6243 | (c) 303.903.8515 | (f) 877.876.9101

-----Original Message-----

From: Pfeiffer, Tricia
Sent: Thursday, July 10, 2014 10:25 AM
To: dprice@mhanation.com
Cc: Huff, Blake; Bahrman, Sarah; Oberley, Gregory; Copeland, Michael
Subject: RE: Saltwater leak on Fort Berthold reservation-PWS concern

Dana,

Thanks for the informative discussion this morning. My understanding is that over 1,000,000 gallons of produced water spilled into Bear Den Creek--is this correct? (Note: Bear Den Creek has a surface PWS intake for the at mouth of the Bear Den Creek)

Can you find out the following info:

1. Was the Environmental Tribal Department notified immediately? Within an hour of the discovery?
2. Who notified the Tribe: State or Operator
3. I understand the NDDOH is collecting samples: where and what are they analyzing for?
4. Can I get the Lat/Long for the spill site?

Tricia Pfeiffer
Environmental Engineer
US EPA Region 8 Watershed & Aquifer Protection Unit
Phone: (303) 312-6271
Fax: (303) 312-7150

<http://www.epa.gov/region8/ecosystems/>

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-----Original Message-----

From: Dana Price [mailto:dprice@mhanation.com]
Sent: Thursday, July 10, 2014 10:05 AM
To: Pfeiffer, Tricia
Subject: RE: Saltwater leak on Fort Berthold reservation

Yes we were contacted. I called you yesterday and left a voicemail in RE: the incident. I also told Blake as well.

Dana Price

TAT Environmental/EPA

Water Quality Coordinator

701-627-4569 Office

701-627-2917 Fax

701-421-5608 Cell

dprice@mhanation.com

From: Pfeiffer, Tricia [Pfeiffer.Tricia@epa.gov]

Sent: Wednesday, July 09, 2014 6:17 PM

To: Anthony Ranalli; Joel Galloway; Vining, Kevin; Dana Price; Edmund Baker

Cc: Huff, Blake

Subject: FW: Saltwater leak on Fort Berthold reservation

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Tricia Pfeiffer

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To: [Ostrander](#)
[David](#);
CC:
Date: 7/10/2014 11:58:16 AM
Subject: RE: Arrow Pipeline Spill, aka Aero Pipeline Spill, akaCrestwood Midstream Partners Pipeline Spill

[REDACTED]

Sarah E. Bahrman | Unit Chief, Drinking Water | U.S. Environmental Protection Agency - Region 8
(p) 303.312.6243 | (c) 303.903.8515 | (f) 877.876.9101

From: Ostrander, David
Sent: Thursday, July 10, 2014 11:54 AM
To: Bahrman, Sarah
Subject: Fw: Arrow Pipeline Spill, aka Aero Pipeline Spill, aka Crestwood Midstream Partners Pipeline Spill

[REDACTED]

From: Stevenson, Peter
Sent: Thursday, July 10, 2014 6:43:53 AM
To: Ostrander, David; Williams, Laura; Romero, David
Subject: Arrow Pipeline Spill, aka Aero Pipeline Spill, aka Crestwood Midstream Partners Pipeline Spill

[REDACTED]

[REDACTED]

[REDACTED]

From: ["Pfeiffer, Tricia" <Tricia>](#)
To: [Bahrman](#)
[Sarah;Romero](#)
[David](#)
CC: [edmundbaker@mhanation.com](#)
[dprice@mhanation.com](#)
["Huff, Blake" <Huff.Blake@epa.gov>](#)
Date: 7/10/2014 11:01:05 AM
Subject: Bear Den Creek-Baseline data
Attachments: [Bear Den Creek.xls](#)



Tricia Pfeiffer
Environmental Engineer
US EPA Region 8 Watershed & Aquifer Protection Unit
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Fax: (303) 312-7150

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From: Yersak, Thomas
Sent: Thursday, July 10, 2014 11:41 AM
To: Pfeiffer, Tricia; Joel Galloway; Anthony Ranalli
Cc: Oberley, Gregory
Subject: RE: information request

[REDACTED]

| | | | | | | | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] |
| [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] |
| [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] |

V/r

Thomas Yersak
SEE: Water and Energy Specialist
Tribal NPDES/UIC/NEPA Data Support
Cube: 5146
Phone: 312-6671

From: Pfeiffer, Tricia
Sent: Thursday, July 10, 2014 11:09 AM
To: Joel Galloway; Anthony Ranalli
Cc: Yersak, Thomas; Oberley, Gregory
Subject: information request

[REDACTED]

Tricia Pfeiffer
Environmental Engineer
US EPA Region 8 Watershed & Aquifer Protection Unit
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From: ["Romero, David" <David>](#)
To: [Pfeiffer](#)
[Tricia](#)
CC: ["Bahrman, Sarah" <Bahrman.Sarah@epa.gov>](#)
["Oberley, Gregory" <Oberley.Gregory@epa.gov>](#)
["Yersak, Thomas" <Yersak.Thomas@epa.gov>](#)
Date: 7/10/2014 11:15:13 AM
Subject: RE: spill in Bear Den Creek



The NRC report marks the location lat/long at: 47 47' 05" N/ 102 38' 38" W. I don't know whether this has been verified.

From: Pfeiffer, Tricia
Sent: Thursday, July 10, 2014 11:59 AM
To: Romero, David
Cc: Bahrman, Sarah; Oberley, Gregory; Yersak, Thomas
Subject: FW: spill in Bear Den Creek

Hey David,

Ostrander suggested I contact you...we would like to get the Lat/Longs for the spill location on Bear Den Creek.

--t

Tricia Pfeiffer
Environmental Engineer
US EPA Region 8 Watershed & Aquifer Protection Unit
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From: Ostrander, David
Sent: Thursday, July 10, 2014 11:57 AM
To: Pfeiffer, Tricia
Subject: Re: spill in Bear Den Creek

Talk to david romero. I am out today on leave.

From: Pfeiffer, Tricia
Sent: Thursday, July 10, 2014 11:16:41 AM
To: Ostrander, David
Cc: Bahrman, Sarah
Subject: spill in Bear Den Creek



David,

Do you have the Lat/Long data for where the spill occurred? If so, can you provide it to both Sarah and I J

Tricia Pfeiffer
Environmental Engineer
US EPA Region 8 Watershed & Aquifer Protection Unit
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To: [Mylott](#)
[Richard;Mohr](#)
[Mindy;McClain-Vanderpool](#)
[Lisa;McGrath](#)
[Shaun;Cantor](#)
[Howard;Card](#)
[Joan;Ostrander](#)
[David;Williams](#)
[Laura;Romero](#)
[David;Morales](#)
[Monica;Mitre](#)
[Alfreda;Phillips](#)
[Gregory;Hestmark](#)
[Martin;Thomas](#)
[Deb;Videtich](#)
[Callie;Hoskie](#)
[Sadie](#)

CC:

Date: 7/10/2014 12:23:01 PM

Subject: UPDATE: Mandaree, ND Drinking Water

Quick Update:

According to Pete Stevenson, the Army Corps of Engineers was out on the lake in the area of the intake to the Mandaree water plant and did not notice any visible sheen or other indicators that contamination had reached the water plant. As a precautionary measure, the water operators have collected samples from the area around the intake and from the treated water and will test for diesel range organics, sodium (as an indicator of total dissolved solids or brine), metals, and radiologicals. Samples are at the state lab in Bismarck and we should get some preliminary results later today.

From: Mylott, Richard

Sent: Thursday, July 10, 2014 9:38 AM

To: Bahrman, Sarah; Mohr, Mindy; McClain-Vanderpool, Lisa; McGrath, Shaun; Cantor, Howard; Card, Joan; Ostrander, David; Williams, Laura; Romero, David; Morales, Monica; Mitre, Alfreda; Phillips, Gregory; Hestmark, Martin

Subject: UPDATED AP: Saltwater leak alters water supply for 1 ND town

Fyi. Pete Stevenson is on-scene.

Estimated 1M gallons of saltwater leaks in ND bay

By Associated Press July 9 at 7:54 PM

MANDAREE, N.D. — Around 1 million gallons of saltwater spilled into a North Dakota bay, causing some environmental damage but sparing a nearby lake that provides drinking water for an American Indian reservation, company and tribe officials said Wednesday.

Three Affiliated Tribes Chairman Tex Hall told The Associated Press that an underground pipeline near Mandaree leaked about 24,000 barrels of brine into Bear Den Bay, a tributary to Lake Sakakawea. That Missouri River reservoir provides water to communities on the Fort Berthold Indian Reservation, occupied by the Mandan, Hidatsa and Arikara tribes in the heart of North Dakota's booming oil patch.

Saltwater is an unwanted byproduct of oil and natural gas drilling that can be 20 times saltier than ocean water. At least some damage to trees, bushes and grass was reported, but the extent wasn't immediately clear.

Miranda Jones, vice president of environmental safety and regulatory at Houston-based Crestwood Midstream Services Inc., whose subsidiary Aero Pipeline LLC owns the pipeline, said the leak likely started over the weekend but wasn't discovered until Tuesday. The pipeline is not equipped with a system that sends an alert when there's a leak, she said.

"This is something that no company wants on their record, and we are working diligently to clean it up," Jones said.

Tribal leaders switched to an alternative source of water Wednesday but were again tapping Lake Sakakawea after concluding the contamination was limited to the bay, Hall said.

An investigator with the federal Environmental Protection Agency arrived Wednesday at the site.

Kris Roberts, an environmental geologist with the North Dakota Health Department, said damage from the toxic spill could be seen Wednesday.

“We’ve got dead trees, dead grasses, dead bushes, dying bushes,” Roberts said.

Karolin Rockvoy, a McKenzine County Emergency manager, said the spill appeared to have gone undetected for some time.

“Looking at vegetation, it didn’t happen yesterday,” she said. “I can guarantee you that.”

The number of saltwater spills in North Dakota has grown with the state’s soaring oil production.

North Dakota produced 25.5 million barrels of brine in 2012, the latest figures available. A barrel is 42 gallons. There were 141 pipeline leaks reported in North Dakota in 2012, 99 of which spilled about 8,000 barrels of the saltwater. About 6,150 barrels of the spilled saltwater was recovered, state regulators said.

In 2006, a broken oil pipeline belched more than a million gallons of saltwater into a northwestern North Dakota creek, aquifer and pond. The cleanup efforts are ongoing at that site, which has been called the worst environmental disaster in state history.

The ruptured pipeline allowed saltwater to spew unnoticed for weeks into a tributary of the Yellowstone River near Alexander and caused a massive die-off of fish, turtles and plants.

That spill came during the infancy of North Dakota’s oil boom. Now, a network of saltwater pipelines extends to hundreds of disposal wells in western North Dakota, where the brine is pumped underground for permanent storage.

Proposed legislation to mandate flow meters and cutoff switches on such lines was overwhelmingly rejected last year in the Legislature.

MacPherson reported from Bismarck, N.D.

From: Mylott, Richard

Sent: Wednesday, July 09, 2014 4:27 PM

To: Bahrman, Sarah; Mohr, Mindy; McClain-Vanderpool, Lisa; McGrath, Shaun; Cantor, Howard; Card, Joan; Ostrander, David; Williams, Laura; Stevenson, Peter; Romero, David; Morales, Monica; Mitre, Alfreda; Phillips, Gregory; Hestmark, Martin

Subject: AP: Saltwater leak alters water supply for 1 ND town

Fyi.

Saltwater leak alters water supply for 1 ND town

By Associated Press July 9 at 5:31 PM

MANDAREE, N.D. — Tribal leaders switched to an alternative source of water Wednesday for one town on an American Indian reservation in North Dakota following a substantial leak from a saltwater pipeline.

Kris Roberts, an environmental geologist with the North Dakota Health Department, said the spill was reported Tuesday but officials did not have any information on volumes or if the brine had reached Bear Den Bay, a tributary to Lake Sakakawea. The lake, a reservoir of the Missouri River, provides drinking water to several communities on the Fort Berthold Indian Reservation, occupied by the Mandan, Hidatsa and Arikara tribes in the heart of North Dakota's booming oil patch.

Saltwater is an unwanted byproduct of oil and natural gas drilling that can be 20 times saltier than ocean water.

Three Affiliated Tribes Chairman Tex Hall said in a statement that "there are no specific concerns over the water safety" but that tribal officials closed the water intake to Mandaree as a precaution without elaborating on what steps were taken. Hall said the briny water did not appear to have reached Lake Sakakawea.

Houston-based Crestwood Midstream Services Inc., owner of the pipeline, said in a statement Wednesday that the spill was contained and cleanup was underway. The company said it was investigating the cause of the leak but would not comment beyond its statement.

The federal Environmental Protection Agency said an investigator was heading to the site Wednesday afternoon.

Roberts said damage from the toxic spill could be seen Wednesday.

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To: [Hoskie](#)
[Sadie](#)
CC:
Date: 7/10/2014 12:52:53 PM
Subject: Re: UPDATE: Mandaree, ND Drinking Water

Will do - sorry for the oversight.

From: Hoskie, Sadie
Sent: Thursday, July 10, 2014 12:39:30 PM
To: Bahrman, Sarah
Subject: Re: UPDATE: Mandaree, ND Drinking Water

Thanks Sarah. Can you add Art and Kimberly as well to your updates. Thanks.

From: Bahrman, Sarah
Sent: Thursday, July 10, 2014 12:23:01 PM
To: Mylott, Richard; Mohr, Mindy; McClain-Vanderpool, Lisa; McGrath, Shaun; Cantor, Howard; Card, Joan; Ostrander, David; Williams, Laura; Romero, David; Morales, Monica; Mitre, Alfreda; Phillips, Gregory; Hestmark, Martin; Thomas, Deb; Videtich, Callie; Hoskie, Sadie
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By Associated Press July 9 at 5:31 PM

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Kris Roberts, an environmental geologist with the North Dakota Health Department, said the spill was reported Tuesday but officials did not have any information on volumes or if the brine had reached Bear Den Bay, a tributary to Lake Sakakawea. The lake, a reservoir of the Missouri River, provides drinking water to several communities on the Fort Berthold Indian Reservation, occupied by the Mandan, Hidatsa and Arikara tribes in the heart of North Dakota's booming oil patch.

Saltwater is an unwanted byproduct of oil and natural gas drilling that can be 20 times saltier than ocean water.

Three Affiliated Tribes Chairman Tex Hall said in a statement that "there are no specific concerns over the water safety" but that tribal officials closed the water intake to Mandaree as a precaution without elaborating on what steps were taken. Hall said the briny water did not appear to have reached Lake Sakakawea.

Houston-based Crestwood Midstream Services Inc., owner of the pipeline, said in a statement Wednesday that the spill was contained and cleanup was underway. The company said it was investigating the cause of the leak but would not comment beyond its statement.

The federal Environmental Protection Agency said an investigator was heading to the site Wednesday afternoon.

Roberts said damage from the toxic spill could be seen Wednesday.

"We've got dead trees, dead grasses, dead bushes, dying bushes," Roberts said.

Karolin Rockvoy, a McKenzine County Emergency manager, said the spill appeared to have gone undetected for some time.

"Looking at vegetation, it didn't happen yesterday," she said. "I can guarantee you that."

The number of saltwater spills in North Dakota has grown with the state's soaring oil production.

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In 2006, a broken oil pipeline belched more than a million gallons of saltwater into a northwestern North Dakota creek, aquifer and pond. The cleanup efforts are ongoing at that site, which has been called the worst environmental disaster in state history.

The ruptured pipeline allowed briny water to spew unnoticed for weeks into a tributary of the Yellowstone River near Alexander and caused a massive die-off of fish, turtles and plants.

That spill came during the infancy of North Dakota's oil boom. Now, a network of saltwater pipelines extends to hundreds of disposal wells in western North Dakota, where the briny water is pumped underground for permanent storage.

Proposed legislation to mandate flow meters and cutoff switches on such lines was overwhelmingly rejected last year in the Legislature.

From: ["Bahrman, Sarah" </O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE:GROUP \(FYDIBOHF23SPDLT\)/CN=RECIPIENTS/CN=1D493CF492ED4FC0BE275A699826A64C-BAHRMAN.SARAH>](#)
To: [Palomares](#)
[Art:Pardue-Welch](#)
[Kimberly:](#)
CC:
Date: 7/10/2014 12:53:57 PM
Subject: Fw: AP: Saltwater leak alters water supply for 1 ND town

Hi guys-
I'm sending two updates- sorry I didn't initially copy you both!

From: Bahrman, Sarah
Sent: Thursday, July 10, 2014 8:09:43 AM
To: Mylott, Richard; Mohr, Mindy; McClain-Vanderpool, Lisa; McGrath, Shaun; Cantor, Howard; Card, Joan; Ostrander, David; Williams, Laura; Stevenson, Peter; Romero, David; Morales, Monica; Mitre, Alfreda; Phillips, Gregory; Hestmark, Martin; Videtich, Callie; Thomas, Deb; Hoskie, Sadie
Subject: RE: AP: Saltwater leak alters water supply for 1 ND town

Hi all –
Jack Sorum, a drinking water treatment engineer with Indian Health Service, is on site in Mandaree this morning to evaluate the impact to the drinking water intake, what samples have been or should be collected in that area, and the status of the water supply. Jack has Pete Stevenson's cell phone number so they can coordinate.

I will plan to send an update later this morning once we have more information. Please let me know if you have any questions.
Thanks,
Sarah

Sarah E. Bahrman | Unit Chief, Drinking Water | U.S. Environmental Protection Agency - Region 8
(p) 303.312.6243 | (c) 303.903.8515 | (f) 877.876.9101

From: Mylott, Richard
Sent: Wednesday, July 09, 2014 4:27 PM
To: Bahrman, Sarah; Mohr, Mindy; McClain-Vanderpool, Lisa; McGrath, Shaun; Cantor, Howard; Card, Joan; Ostrander, David; Williams, Laura; Stevenson, Peter; Romero, David; Morales, Monica; Mitre, Alfreda; Phillips, Gregory; Hestmark, Martin
Subject: AP: Saltwater leak alters water supply for 1 ND town

Fyi.

Saltwater leak alters water supply for 1 ND town

By Associated Press July 9 at 5:31 PM

MANDAREE, N.D. — Tribal leaders switched to an alternative source of water Wednesday for one town on an American Indian reservation in North Dakota following a substantial leak from a saltwater pipeline.

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That spill came during the infancy of North Dakota's oil boom. Now, a network of saltwater pipelines extends to hundreds of disposal wells in western North Dakota, where the briny water is pumped underground for permanent storage. Proposed legislation to mandate flow meters and cutoff switches on such lines was overwhelmingly rejected last year in the Legislature.

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To: [Palomares](#)
["Art: Pardue-Welch"](#)
[Kimberly:](#)

CC:

Date: 7/10/2014 12:54:30 PM

Subject: Fw: UPDATE: Mandaree, ND Drinking Water

[Here's the second. I'll keep you posted.](#)

From: Bahrman, Sarah
Sent: Thursday, July 10, 2014 12:23:01 PM
To: Mylott, Richard; Mohr, Mindy; McClain-Vanderpool, Lisa; McGrath, Shaun; Cantor, Howard; Card, Joan; Ostrander, David; Williams, Laura; Romero, David; Morales, Monica; Mitre, Alfreda; Phillips, Gregory; Hestmark, Martin; Thomas, Deb; Videtich, Callie; Hoskie, Sadie
Subject: UPDATE: Mandaree, ND Drinking Water

Quick Update:

According to Pete Stevenson, the Army Corps of Engineers was out on the lake in the area of the intake to the Mandaree water plant and did not notice any visible sheen or other indicators that contamination had reached the water plant. As a precautionary measure, the water operators have collected samples from the area around the intake and from the treated water and will test for diesel range organics, sodium (as an indicator of total dissolved solids or brine), metals, and radiologicals. Samples are at the state lab in Bismarck and we should get some preliminary results later today.

Sarah E. Bahrman | Unit Chief, Drinking Water | U.S. Environmental Protection Agency - Region 8
(p) 303.312.6243 | (c) 303.903.8515 | (f) 877.876.9101

From: Mylott, Richard
Sent: Thursday, July 10, 2014 9:38 AM
To: Bahrman, Sarah; Mohr, Mindy; McClain-Vanderpool, Lisa; McGrath, Shaun; Cantor, Howard; Card, Joan; Ostrander, David; Williams, Laura; Romero, David; Morales, Monica; Mitre, Alfreda; Phillips, Gregory; Hestmark, Martin
Subject: UPDATED AP: Saltwater leak alters water supply for 1 ND town

Fyi. Pete Stevenson is on-scene.

Estimated 1M gallons of saltwater leaks in ND bay

By Associated Press July 9 at 7:54 PM

MANDAREE, N.D. — Around 1 million gallons of saltwater spilled into a North Dakota bay, causing some environmental damage but sparing a nearby lake that provides drinking water for an American Indian reservation, company and tribe officials said Wednesday.

Three Affiliated Tribes Chairman Tex Hall told The Associated Press that an underground pipeline near Mandaree leaked about 24,000 barrels of brine into Bear Den Bay, a tributary to Lake Sakakawea. That Missouri River reservoir provides water to communities on the Fort Berthold Indian Reservation, occupied by the Mandan, Hidatsa and Arikara tribes in the heart of North Dakota's booming oil patch.

Saltwater is an unwanted byproduct of oil and natural gas drilling that can be 20 times saltier than ocean water. At least some damage to trees, bushes and grass was reported, but the extent wasn't immediately clear.

Miranda Jones, vice president of environmental safety and regulatory at Houston-based Crestwood Midstream Services Inc., whose subsidiary Aero Pipeline LLC owns the pipeline, said the leak likely started over the weekend but wasn't discovered until Tuesday. The pipeline is not equipped with a system that sends an alert when there's a leak, she said.

"This is something that no company wants on their record, and we are working diligently to clean it up," Jones said.

Tribal leaders switched to an alternative source of water Wednesday but were again tapping Lake Sakakawea after concluding the contamination was limited to the bay, Hall said.

An investigator with the federal Environmental Protection Agency arrived Wednesday at the site.

Kris Roberts, an environmental geologist with the North Dakota Health Department, said damage from the toxic spill could be seen Wednesday.

"We've got dead trees, dead grasses, dead bushes, dying bushes," Roberts said.

Karolin Rockvoy, a McKenzine County Emergency manager, said the spill appeared to have gone undetected for some time.

"Looking at vegetation, it didn't happen yesterday," she said. "I can guarantee you that."

The number of saltwater spills in North Dakota has grown with the state's soaring oil production.

North Dakota produced 25.5 million barrels of brine in 2012, the latest figures available. A barrel is 42 gallons. There were 141 pipeline leaks reported in North Dakota in 2012, 99 of which spilled about 8,000 barrels of the saltwater. About 6,150 barrels of the spilled saltwater was recovered, state regulators said.

In 2006, a broken oil pipeline belched more than a million gallons of saltwater into a northwestern North Dakota creek, aquifer and pond. The cleanup efforts are ongoing at that site, which has been called the worst environmental disaster in state history.

The ruptured pipeline allowed saltwater to spew unnoticed for weeks into a tributary of the Yellowstone River near Alexander and caused a massive die-off of fish, turtles and plants.

That spill came during the infancy of North Dakota's oil boom. Now, a network of saltwater pipelines extends to hundreds of disposal wells in western North Dakota, where the brine is pumped underground for permanent storage.

Proposed legislation to mandate flow meters and cutoff switches on such lines was overwhelmingly rejected last year in the Legislature.

MacPherson reported from Bismarck, N.D.

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Sent: Wednesday, July 09, 2014 4:27 PM

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Subject: AP: Saltwater leak alters water supply for 1 ND town

Fyi.

Saltwater leak alters water supply for 1 ND town

By Associated Press July 9 at 5:31 PM

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From: ["Pfeiffer, Tricia" <Tricia>](#)
To: [Bahrman](#)
[Sarah;Romero](#)
[David;Beeler](#)
[Cindy](#)

CC:

Date: 7/10/2014 12:48:23 PM

Subject: FBIR: ND Pipeline Spill

Mapped the USGS sampling location, Mandaree PWS intake and spill location

Tricia Pfeiffer
Environmental Engineer
US EPA Region 8 Watershed & Aquifer Protection Unit
Phone: (303) 312-6271
Fax: (303) 312-7150

<http://www.epa.gov/region8/ecosystems/>

US EPA Region 8
1595 Wynkoop Street
Mail Code 8EP-EPR
Denver, Colorado 80202

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From: Yersak, Thomas
Sent: Thursday, July 10, 2014 1:46 PM
To: Pfeiffer, Tricia; Oberley, Gregory
Subject: ND Pipeline Spill

Thomas Yersak
SEE: Water and Energy Specialist
Tribal NPDES/UIC/NEPA Data Support

Cube: 5146

Phone: 312-6671



From: ["Bahrman, Sarah" </O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE:GROUP \(FYDIBOHF23SPDLT\)/CN=RECIPIENTS/CN=1D493CF492ED4FC0BE275A699826A64C-BAHRMAN.SARAH>](mailto:Sarah.Bahrman@epa.gov)
To: [Pfeiffer](#)
[Tricia:Romero](#)
[David:Beeler](#)
[Cindy:](#)
CC:
Date: 7/10/2014 1:51:02 PM
Subject: RE: FBIR: ND Pipeline Spill

Thanks, Trish – can you tell me the distance to the intakes (stream miles)?

Sarah E. Bahrman | Unit Chief, Drinking Water | U.S. Environmental Protection Agency - Region 8
(p) 303.312.6243 | (c) 303.903.8515 | (f) 877.876.9101

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Sent: Thursday, July 10, 2014 1:46 PM
To: Pfeiffer, Tricia; Oberley, Gregory
Subject: ND Pipeline Spill

Thomas Yersak
SEE: Water and Energy Specialist
Tribal NPDES/UIC/NEPA Data Support
Cube: 5146
Phone: 312-6671

From: ["Bahrman, Sarah" </O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP \(FYDIBOHF23SPDLT\)/CN=RECIPIENTS/CN=1D493CF492ED4FC0BE275A699826A64C-BAHRMAN, SARAH>](mailto:Sarah.Bahrman@epa.gov)
To: [Mohr](#)
["Mindy: Mylott"](#)
[Richard:](#)
CC:
Date: 7/10/2014 2:01:05 PM
Subject: FW: Bakken Team: FW: Ft. Berthold North Dakota Pipeline SpillCleanup May Take Weeks - 1 million gallons of oil drilling saltwater

FYi in case you haven't seen this one

Sarah E. Bahrman | Unit Chief, Drinking Water | U.S. Environmental Protection Agency - Region 8
(p) 303.312.6243 | (c) 303.903.8515 | (f) 877.876.9101

From: Beeler, Cindy

Sent: Thursday, July 10, 2014 1:15 PM

To: Bahrman, Sarah; Belille, Jean; Bohan, Suzanne; Boomgaard, Craig; Cobb, David; Cody, Cynthia; Dehart, Matthew; Ehrig, Lance; Fronczak, David; Gieck, Stephanie; Giese, Andrea; Heimdal, Monica; Hoffman, Jocelyn; Hofstader, Olive; Huff, Blake; Kimbel, Curtis; Lamdin, Randy; Llamozas, Emilio; Matsumoto, Kimi; McComb, Martin; Merritt, Steven; Myers, Craig; North, Alexis; Payan, Melissa; Pfeiffer, Tricia; Pierre-Louis, Philippe; Platt, Amy; Roberts, Sarah; Schmit, Ayn; Smith, Claudia; South, Brenda; Urban, Candice; Wang, Gary; Wenstrom, Michael; Wortman, Eric

Cc: Atencio, Kathie; Campbell, Gwen; Darling, Corbin; Land, Kelcey; Martinez, Jeffrey; Minter, Douglas; Mitre, Alfreda; O'Connor, Darcy; Opekar, Kimberly; Ostrander, David; Palomares, Art; Pardue-Welch, Kimberly; Pearson, Janice; Reynolds, Cynthia; Urdiales, Aaron; Williams, Laura

Subject: Bakken Team: FW: Ft. Berthold North Dakota Pipeline Spill Cleanup May Take Weeks - 1 million gallons of oil drilling saltwater

Thanks Karen Hamilton and Jean Belille for sharing this info ...

Cindy Beeler

US EPA Region 8, Energy Advisor

Office of the Regional Administrator

Tel: 303-312-6204

Beeler.Cindy@epa.gov

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unauthorized use, disclosure or distribution is prohibited. If you are not the intended recipient, please contact the sender and destroy all copies of this message.

From: Hamilton, Karen

Sent: Thursday, July 10, 2014 12:48 PM

To: Brown, Randy; Ostrander, David; Spence, Sandra; Ott, Toney; Mitre, Alfreda; Beeler, Cindy; Pfeiffer, Tricia; Bloom, Judy

Subject: Ft. Berthold North Dakota Pipeline Spill Cleanup May Take Weeks - 1 million gallons of oil drilling saltwater

From: Frank [<mailto:homebythehills@comcast.net>]

Sent: Thursday, July 10, 2014 12:44 PM

To: homebythehills

Subject: Associated Press: North Dakota Pipeline Spill Cleanup May Take Weeks - 1 million gallons of oil drilling saltwater

North Dakota Pipeline Spill Cleanup May Take Weeks

<http://abcnews.go.com/US/wireStory/saltwater-pipeline-leaks-indian-reservation-24488733>

MANDAREE, N.D. — Jul 10, 2014, 11:21 AM ET

By JOSH WOOD and JAMES MacPHERSON Associated Press



A pipeline has leaked 1 million gallons of oil drilling saltwater into the ground at a North Dakota Indian reservation, and some of the byproduct ended up in a bay that feeds the lake that provides the reservation's drinking water, company and tribal officials said.

Cleanup at the Fort Berthold reservation site continued Thursday, two days after the leak was discovered. It was expected to last for weeks, said Miranda Jones, the vice president of environmental safety and regulatory at Houston-based Crestwood Midstream Services Inc.

Jones said the leak at the underground pipeline, owned by Crestwood subsidiary Aero Pipeline LLC, likely started over the Fourth of July weekend. The pipeline was not equipped with a system that sends an alert when there is a leak, she said, and the spill was only discovered when the company was going through production loss reports.

"This is something no company wants on their record, and we are working diligently to clean it up," Jones said.

An unknown amount of the fluid entered Bear Den Bay. That bay leads to Lake Sakakawea, which provides water for the reservation, occupied by the Mandan, Hidatsa and Arikara tribes in the heart of western North Dakota's booming oil patch. But company and tribal officials said the spill has been contained and has not affected the lake.

"We have a berm and a dike around it, around that bay area, to keep it from going into the lake," said Three Affiliated Tribes Chairman Tex Hall.

Saltwater is a naturally occurring, unwanted byproduct of oil and natural gas production that is between 10 and 30 times saltier than sea water. The state considers it an environmental hazard.

The briny byproduct also may contain petroleum and residue from hydraulic fracturing operations.

Kris Roberts, an environmental geologist with the North Dakota Department of Health, said damage from the toxic spill could be seen when he visited the site on Tuesday.

"We've got dead trees, dead grasses, dead bushes, dying bushes," he said.

Karolin Rockvoy, a McKenzie County emergency manager, said it was apparent from looking at vegetation that the spill went undetected for some time.

The number of saltwater spills in North Dakota has grown with the state's soaring oil production. North Dakota produced 25.5 million barrels of brine in 2012, the latest figures available. A barrel is 42 gallons. There were 141 pipeline leaks reported in North Dakota in 2012, 99 of which spilled about 8,000 barrels of saltwater. About 6,150 barrels of the spilled saltwater was recovered, state regulators said.

Fort Berthold Indian Reservation plays a key role in the state's oil production, the second-highest in the nation. The reservation currently represents more than 300,000 of North Dakota's 1 million barrels of oil produced daily, according to the state's Department of Mineral Resources.

In 2006, a broken oil pipeline belched more than a million gallons of saltwater into a northwestern North Dakota creek, aquifer and pond. The cleanup efforts are ongoing at that site, which has been called the worst environmental disaster in state history.

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MacPherson reported from Bismarck, North Dakota.

From: ["Yersak, Thomas" <Tho>](#)
To: [Bahrman](#)
[Sarah](#)
CC: ["Pfeiffer, Tricia" <Pfeiffer.Tricia@epa.gov>](#)
["Oberley, Gregory" <Oberley.Gregory@epa.gov>](#)
Date: 7/10/2014 1:50:15 PM
Subject: RE: FBIR: ND Pipeline Spill--info request

Distance from pipeline spill to Mandaree Water Plant Intake is approximately 7500 feet

From: Pfeiffer, Tricia
Sent: Thursday, July 10, 2014 1:55 PM
To: Yersak, Thomas
Subject: FW: FBIR: ND Pipeline Spill--info request

Can you answer Sarah's question below and cc the entire group, including me?

Tricia Pfeiffer
Environmental Engineer
US EPA Region 8 Watershed & Aquifer Protection Unit
Phone: (303) 312-6271
Fax: (303) 312-7150

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From: Bahrman, Sarah
Sent: Thursday, July 10, 2014 1:51 PM
To: Pfeiffer, Tricia; Romero, David; Beeler, Cindy
Subject: RE: FBIR: ND Pipeline Spill

Thanks, Trish – can you tell me the distance to the intakes (stream miles)?

Sarah E. Bahrman | Unit Chief, Drinking Water | U.S. Environmental Protection Agency - Region 8
(p) 303.312.6243 | (c) 303.903.8515 | (f) 877.876.9101

From: Pfeiffer, Tricia
Sent: Thursday, July 10, 2014 1:48 PM
To: Bahrman, Sarah; Romero, David; Beeler, Cindy
Subject: FBIR: ND Pipeline Spill

Mapped the USGS sampling location, Mandaree PWS intake and spill location

Tricia Pfeiffer
Environmental Engineer
US EPA Region 8 Watershed & Aquifer Protection Unit
Phone: (303) 312-6271
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From: Yersak, Thomas
Sent: Thursday, July 10, 2014 1:46 PM
To: Pfeiffer, Tricia; Oberley, Gregory
Subject: ND Pipeline Spill

Thomas Yersak

SEE: Water and Energy Specialist
Tribal NPDES/UIC/NEPA Data Support
Cube: 5146
Phone: 312-6671

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To: Mylott
Richard;Mohr
Mindy;McClain-Vanderpool
Lisa;McGrath
Shaun;Cantor
Howard;Card
Joan;Ostrander
David;Williams
Laura;Romero
David;Mitre
Alfreda;Phillips
Gregory;Hestmark
Martin;Thomas
Deb;Videtich
Callie;Hoskie
Sadie;Palomares
Art;Pardue-Welch
Kimberly;Merida
Mario

CC:

Date: 7/10/2014 3:42:51 PM

Subject: UPDATE: Mandaree, ND Drinking Water

I just spoke with Jack Sorum of IHS and Bruce Fox, the head operator of the Mandaree Water Plant. Unfortunately they don't yet have any results from samples collected this morning, but hope to have that information first thing tomorrow. Bruce will call me as soon as he has any data and I will send that information out to you all. Jack and Bruce did verify that the intake pumps are on and the plant is back to normal operations. They shut the intake down for some time yesterday and were able to treat water from a 1M gallon raw water tank temporarily to continue to provide water to the town of Mandaree. Please let me know if you have any questions.

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(p) 303.312.6243 | (c) 303.903.8515 | (f) 877.876.9101

From: Bahrman, Sarah

Sent: Thursday, July 10, 2014 12:23 PM

To: Mylott, Richard; Mohr, Mindy; McClain-Vanderpool, Lisa; McGrath, Shaun; Cantor, Howard; Card, Joan; Ostrander, David; Williams, Laura; Romero, David; Morales, Monica; Mitre, Alfreda; Phillips, Gregory; Hestmark, Martin; Thomas, Deb; Videtich, Callie; Hoskie, Sadie

Subject: UPDATE: Mandaree, ND Drinking Water

Quick Update:

According to Pete Stevenson, the Army Corps of Engineers was out on the lake in the area of the intake to the Mandaree water plant and did not notice any visible sheen or other indicators that contamination had reached the water plant. As a precautionary measure, the water operators have collected samples from the area around the intake and from the treated water and will test for diesel range organics, sodium (as an indicator of total dissolved solids or brine), metals, and radiologicals. Samples are at the state lab in Bismarck and we should get some preliminary results later today.

Sarah E. Bahrman | Unit Chief, Drinking Water | U.S. Environmental Protection Agency - Region 8
(p) 303.312.6243 | (c) 303.903.8515 | (f) 877.876.9101

From: Mylott, Richard

Sent: Thursday, July 10, 2014 9:38 AM

To: Bahrman, Sarah; Mohr, Mindy; McClain-Vanderpool, Lisa; McGrath, Shaun; Cantor, Howard; Card, Joan; Ostrander, David; Williams, Laura; Romero, David; Morales, Monica; Mitre, Alfreda; Phillips, Gregory; Hestmark, Martin

Subject: UPDATED AP: Saltwater leak alters water supply for 1 ND town

Fyi. Pete Stevenson is on-scene.

Estimated 1M gallons of saltwater leaks in ND bay

By Associated Press July 9 at 7:54 PM

MANDAREE, N.D. — Around 1 million gallons of saltwater spilled into a North Dakota bay, causing some environmental damage but sparing a nearby

lake that provides drinking water for an American Indian reservation, company and tribe officials said Wednesday.

Three Affiliated Tribes Chairman Tex Hall told The Associated Press that an underground pipeline near Mandaree leaked about 24,000 barrels of brine into Bear Den Bay, a tributary to Lake Sakakawea. That Missouri River reservoir provides water to communities on the Fort Berthold Indian Reservation, occupied by the Mandan, Hidatsa and Arikara tribes in the heart of North Dakota's booming oil patch.

Saltwater is an unwanted byproduct of oil and natural gas drilling that can be 20 times saltier than ocean water. At least some damage to trees, bushes and grass was reported, but the extent wasn't immediately clear.

Miranda Jones, vice president of environmental safety and regulatory at Houston-based Crestwood Midstream Services Inc., whose subsidiary Aero Pipeline LLC owns the pipeline, said the leak likely started over the weekend but wasn't discovered until Tuesday. The pipeline is not equipped with a system that sends an alert when there's a leak, she said.

"This is something that no company wants on their record, and we are working diligently to clean it up," Jones said.

Tribal leaders switched to an alternative source of water Wednesday but were again tapping Lake Sakakawea after concluding the contamination was limited to the bay, Hall said.

An investigator with the federal Environmental Protection Agency arrived Wednesday at the site.

Kris Roberts, an environmental geologist with the North Dakota Health Department, said damage from the toxic spill could be seen Wednesday.

"We've got dead trees, dead grasses, dead bushes, dying bushes," Roberts said.

Karolin Rockvoy, a McKenzine County Emergency manager, said the spill appeared to have gone undetected for some time.

"Looking at vegetation, it didn't happen yesterday," she said. "I can guarantee you that."

The number of saltwater spills in North Dakota has grown with the state's soaring oil production.

North Dakota produced 25.5 million barrels of brine in 2012, the latest figures available. A barrel is 42 gallons. There were 141 pipeline leaks reported in North Dakota in 2012, 99 of which spilled about 8,000 barrels of the saltwater. About 6,150 barrels of the spilled saltwater was recovered, state regulators said.

In 2006, a broken oil pipeline belched more than a million gallons of saltwater into a northwestern North Dakota creek, aquifer and pond. The cleanup efforts are ongoing at that site, which has been called the worst environmental disaster in state history.

The ruptured pipeline allowed saltwater to spew unnoticed for weeks into a tributary of the Yellowstone River near Alexander and caused a massive

die-off of fish, turtles and plants.

That spill came during the infancy of North Dakota's oil boom. Now, a network of saltwater pipelines extends to hundreds of disposal wells in western North Dakota, where the brine is pumped underground for permanent storage.

Proposed legislation to mandate flow meters and cutoff switches on such lines was overwhelmingly rejected last year in the Legislature.

MacPherson reported from Bismarck, N.D.

From: Mylott, Richard

Sent: Wednesday, July 09, 2014 4:27 PM

To: Bahrman, Sarah; Mohr, Mindy; McClain-Vanderpool, Lisa; McGrath, Shaun; Cantor, Howard; Card, Joan; Ostrander, David; Williams, Laura; Stevenson, Peter; Romero, David; Morales, Monica; Mitre, Alfreda; Phillips, Gregory; Hestmark, Martin

Subject: AP: Saltwater leak alters water supply for 1 ND town

Fyi.

Saltwater leak alters water supply for 1 ND town

By Associated Press July 9 at 5:31 PM

MANDAREE, N.D. — Tribal leaders switched to an alternative source of water Wednesday for one town on an American Indian reservation in North Dakota following a substantial leak from a saltwater pipeline.

Kris Roberts, an environmental geologist with the North Dakota Health Department, said the spill was reported Tuesday but officials did not have any information on volumes or if the brine had reached Bear Den Bay, a tributary to Lake Sakakawea. The lake, a reservoir of the Missouri River, provides drinking water to several communities on the Fort Berthold Indian Reservation, occupied by the Mandan, Hidatsa and Arikara tribes in the heart of North Dakota's booming oil patch.

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Houston-based Crestwood Midstream Services Inc., owner of the pipeline, said in a statement Wednesday that the spill was contained and cleanup was underway. The company said it was investigating the cause of the leak but would not comment beyond its statement. The federal Environmental Protection Agency said an investigator was heading to the site Wednesday afternoon.

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From: ["Bahrman, Sarah" </O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE:GROUP \(FYDIBOHF23SPDLT\)/CN=RECIPIENTS/CN=1D493CF492ED4FC0BE275A699826A64C-BAHRMAN.SARAH>](mailto:Sarah.Bahrman@epa.gov)
To: ["R8 Drinking" <Water>](#)
CC:
Date: 7/10/2014 3:45:52 PM
Subject: FW: UPDATE: Mandaree, ND Drinking Water

[REDACTED]

[REDACTED] !

Sarah E. Bahrman | Unit Chief, Drinking Water | U.S. Environmental Protection Agency - Region 8
(p) 303.312.6243 | (c) 303.903.8515 | (f) 877.876.9101

From: Bahrman, Sarah
Sent: Thursday, July 10, 2014 3:43 PM
To: Mylott, Richard; Mohr, Mindy; McClain-Vanderpool, Lisa; McGrath, Shaun; Cantor, Howard; Card, Joan; Ostrander, David; Williams, Laura; Romero, David; Mitre, Alfreda; Phillips, Gregory; Hestmark, Martin; Thomas, Deb; Videtich, Callie; Hoskie, Sadie; Palomares, Art; Pardue-Welch, Kimberly; Merida, Mario
Subject: UPDATE: Mandaree, ND Drinking Water

[REDACTED]

Sarah E. Bahrman | Unit Chief, Drinking Water | U.S. Environmental Protection Agency - Region 8
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Sent: Thursday, July 10, 2014 12:23 PM
To: Mylott, Richard; Mohr, Mindy; McClain-Vanderpool, Lisa; McGrath, Shaun; Cantor, Howard; Card, Joan; Ostrander, David; Williams, Laura; Romero, David; Morales,

Monica; Mitre, Alfreda; Phillips, Gregory; Hestmark, Martin; Thomas, Deb; Videtich, Callie; Hoskie, Sadie

Subject: UPDATE: Mandaree, ND Drinking Water

[REDACTED]

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From: ["Bahrman, Sarah" </O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP \(FYDIBOHF23SPDLT\)/CN=RECIPIENTS/CN=1D493CF492ED4FC0BE275A699826A64C-BAHRMAN, SARAH>](#)

To: [Griese](#)
[Andrea;Mohr](#)
[Mindy;Copeland](#)
[Michael;Pfeiffer](#)
[Tricia;](#)

CC:

Date: 7/11/2014 8:13:02 AM

Subject: FW: IMG_0578.MOV.mov

Attachments: [IMG_0578.MOV.mov](#)

Video from Jack Sorum of Mandaree intake and area where the brine spill should have entered the bay. Video taken 7/10/14

Sarah E. Bahrman | Unit Chief, Drinking Water | U.S. Environmental Protection Agency - Region 8
(p) 303.312.6243 | (c) 303.903.8515 | (f) 877.876.9101

-----Original Message-----

From: Sarah Bahrman [mailto:sarahbahrman@gmail.com]
Sent: Friday, July 11, 2014 8:08 AM
To: Bahrman, Sarah
Subject: IMG_0578.MOV.mov

From: ["Bahrman, Sarah" </O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP \(FYDIBOHF23SPDLT\)/CN=RECIPIENTS/CN=1D493CF492ED4FC0BE275A699826A64C-BAHRMAN, SARAH>](#)

To: [Mohr](#)
[Mindy;Copeland](#)
[Michael;Griese](#)
[Andrea;Pfeiffer](#)
[Tricia;](#)

CC:

Date: 7/11/2014 8:18:00 AM

Subject: FW: IMG_0583.MOV.mov

Attachments: [IMG_0583.MOV.mov](#)

Second video (2 of 2) from Jack Sorum showing the area of the actual brine spill (tribe has been calling this area the "coolie" but I'm not sure what that means). Video taken 7/10/14.

Sarah E. Bahrman | Unit Chief, Drinking Water | U.S. Environmental Protection Agency - Region 8
(p) 303.312.6243 | (c) 303.903.8515 | (f) 877.876.9101

-----Original Message-----

From: Sarah Bahrman [mailto:sarahbahrman@gmail.com]
Sent: Friday, July 11, 2014 8:10 AM
To: Bahrman, Sarah
Subject: IMG_0583.MOV.mov

From: ["McClain-Vanderpool, Lisa" <\(FYDIBOHF23SPDLT\)/cn=Recipients/cn=972a6f345c3c4e3099fe8ec166ebc712-LVANDERP>](#)
To: [Stavnes](#)
[Sandra;Bahrman](#)
[Sarah](#)
CC: ["Smith, Paula" <Smith.Paula@epa.gov>](#)
["Mylott, Richard" <Mylott.Richard@epa.gov>](#)
["Williams, Laura" <williams.laura@epa.gov>](#)
Date: 7/11/2014 7:36:56 AM
Subject: ACTION: AP inquiry on ND - early deadline this AM

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Lisa

From: ["Sorum, Jack \ \(IHS/ABR/OEH\)" <Jack.Sorum@ihs.gov>](mailto:Jack.Sorum@ihs.gov)

To: [Bahman](#)

[Sarah](#)

CC:

Date: 7/11/2014 8:24:19 AM

Subject:

Sarah,

One more photo which is a panoramic view of the intake and the bay which would be potentially affected by the brine spill. One thing which is kind of comical is the small floating containment which they put near the shore by the rip rap surrounding the intake structure. The containment extends to about 50 feet from the shore. The intake is over 450 feet from the shore.

Jack

*Jack Sorum, PE
Tribal Utility Consultant
Indian Health Service OEH&E
100 SW 1st Street
Room 302, Federal Building
Minot, North Dakota 58701
(701) 852-0250 Ext 21
(701) 839-2410 (fax)*



From: ["Bahrman, Sarah" </O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE:GROUP \(FYDIBOHF23SPDLT\)/CN=RECIPIENTS/CN=1D493CF492ED4FC0BE275A699826A64C-BAHRMAN SARAH>](mailto:Sarah.Bahrman@epa.gov)
To: [Sorum](mailto:Jack.Sorum@ihs.gov)
"Jack \ (IHS/ABR/OEH)" <Jack.Sorum@ihs.gov>
CC: [Mohr](mailto:Mohr@epa.gov)
[Mindy:Griese](mailto:Mindy.Griese@epa.gov)
[Andrea:](mailto:Andrea@epa.gov)
Date: 7/11/2014 9:40:16 AM
Subject: RE: mandaree

Thanks, Jack! Really interesting to see where they boomed. I would think they would have done that in the second bay where the spill would have come in...

I just got some updates. I got Bruce's voicemail and couldn't leave a message so I called Maynard and he hadn't heard anything. So then I called Charles Cech at the ND state lab to find out when the samples would be ready. He'll have preliminary info on DRO, alkalinity, and likely Na by about 2:30 my time today. I'll share whatever info I get as soon as it comes in.

Thanks!
Sarah

Sarah E. Bahrman | Unit Chief, Drinking Water | U.S. Environmental Protection Agency - Region 8
(p) 303.312.6243 | (c) 303.903.8515 | (f) 877.876.9101

From: Sorum, Jack (IHS/ABR/OEH) [mailto:Jack.Sorum@ihs.gov]
Sent: Friday, July 11, 2014 9:24 AM
To: Bahrman, Sarah
Subject:

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100 SW 1st Street
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(701) 839-2410 (fax)*

From: ["Bahrmann, Sarah" </O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE:GROUP \(FYDIBOHF23SPDLT\)/CN=RECIPIENTS/CN=1D493CF492ED4FC0BE275A699826A64C-BAHRMAN SARAH>](#)

To: [McClain-Vanderpool](#)
[Lisa:Stavnes](#)
[Sandra](#)

CC: [Smith](#)
[Paula:Mylott](#)
[Richard:Williams](#)
[Laura](#)

Date: 7/11/2014 9:42:40 AM

Subject: RE: ACTION: AP inquiry on ND - early deadline this AM

[REDACTED]

[REDACTED]

Thanks!

Sarah E. Bahrman | Unit Chief, Drinking Water | U.S. Environmental Protection Agency - Region 8
(p) 303.312.6243 | (c) 303.903.8515 | (f) 877.876.9101

From: McClain-Vanderpool, Lisa
Sent: Friday, July 11, 2014 8:37 AM
To: Stavnes, Sandra; Bahrman, Sarah
Cc: Smith, Paula; Mylott, Richard; Williams, Laura
Subject: ACTION: AP inquiry on ND - early deadline this AM

[REDACTED]

- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

From: ["Bahrman, Sarah" </O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE:GROUP \(FYDIBOHF23SPDLT\)/CN=RECIPIENTS/CN=1D493CF492ED4FC0BE275A699826A64C-BAHRMAN.SARAH>](mailto:Sarah.Bahrman@epa.gov)
To: ["R8 Drinking" <Water>](#)
CC:
Date: 7/11/2014 12:45:05 PM
Subject: FW: ND story

Latest article on the situation at Mandaree, ND on the Fort Berthold reservation. I expect to hear from the ND DOH lab later this afternoon with some preliminary results from raw water and finished water sampling. I'll share that info with you all as soon as it's available.
Thanks!

Sarah E. Bahrman | Unit Chief, Drinking Water | U.S. Environmental Protection Agency - Region 8
(p) 303.312.6243 | (c) 303.903.8515 | (f) 877.876.9101

From: McClain-Vanderpool, Lisa
Sent: Friday, July 11, 2014 9:39 AM
To: McGrath, Shaun; Stavnes, Sandra
Cc: Bahrman, Sarah; Smith, Paula
Subject: ND story

See story below.

I'm currently working on responding to additional AP inquiry on the spill.

From: Mylott, Richard
Sent: Friday, July 11, 2014 9:00 AM
To: McClain-Vanderpool, Lisa
Subject: RE: ACTION: AP inquiry on ND - early deadline this AM

Fyi http://bismarcktribune.com/bakken/officials-no-evidence-brine-in-bay-after-north-dakota-spill/article_b87b7e84-0902-11e4-92c3-001a4bcf887a.html

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To: [Mylott](#)
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[Shaun;Cantor](#)
[Howard;Card](#)
[Joan;Ostrander](#)
[David;Williams](#)
[Laura;Romero](#)
[David;Mitre](#)
[Alfreda;Phillips](#)
[Gregory;Hestmark](#)
[Martin;Thomas](#)
[Deb;Videtich](#)
[Callie;Hoskie](#)
[Sadie;Palomares](#)
[Art;Pardue-Welch](#)
[Kimberly;Merida](#)
[Mario](#)

CC:

Date: 7/11/2014 3:22:07 PM

Subject: UPDATE: Mandaree, ND Drinking Water

I just spoke with Charles Cech at the ND DOH Lab, who provided some preliminary results from the raw water and treated drinking water samples. Total Dissolved Solids (calculated from conductivity), sodium, and total alkalinity were all within normal ranges, indicating no impact from the brine water to the drinking water supply. Diesel range organics tests were non-detect for petroleum products, again indicating no impact to the drinking water supply. The plant will continue operating normally. The operator and I discussed that there is no need to collect additional samples at this time. Please let me know if you have any questions.

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Subject: UPDATE: Mandaree, ND Drinking Water

I just spoke with Jack Sorum of IHS and Bruce Fox, the head operator of the Mandaree Water Plant. Unfortunately they don't yet have any results from samples collected this morning, but hope to have that information first thing tomorrow. Bruce will call me as soon as he has any data and I will send that information out to you all. Jack and Bruce did verify that the intake pumps are on and the plant is back to normal operations. They shut the intake down for some time yesterday and were able to treat water from a 1M gallon raw water tank temporarily to continue to provide water to the town of Mandaree.

Please let me know if you have any questions.

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Sent: Thursday, July 10, 2014 9:38 AM

To: Bahrman, Sarah; Mohr, Mindy; McClain-Vanderpool, Lisa; McGrath, Shaun; Cantor, Howard; Card, Joan; Ostrander, David; Williams, Laura; Romero, David; Morales, Monica; Mitre, Alfreda; Phillips, Gregory; Hestmark, Martin
Subject: UPDATED AP: Saltwater leak alters water supply for 1 ND town

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To: ["R8 Drinking" <Water>](#)
CC: [Sorum](#)
["Jack \ \(IHS/ABR/OEH\\)" <Jack.Sorum@ihs.gov>](#)
Date: 7/11/2014 3:26:04 PM
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From: ["Hinaman, Kurt" <Ku>](#)
To: [Bahrman](#)
[Sarah](#)
CC:
Date: 7/14/2014 6:40:18 AM
Subject: RE: UPDATE: Mandaree, ND Drinking Water

So is the brine now a gw tracer and it can be used to get a modeled age of gw transport down the wash towards the reservoir? Or are the intakes just in a right place or is dilution is the solution?

Just wondering.

No need to take time to reply.

Kurt Hinaman, PG WY3507
SEE
USEPA Drinking Water Unit A
1595 Wynkoop Street (8P-W-DW)
Denver, CO 80202
303-312-6600
<http://www2.epa.gov/region8-waterops/>

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Sent: Friday, July 11, 2014 3:26 PM
To: R8 Drinking Water
Cc: Sorum, Jack (IHS/ABR/OEH)
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To: [Hinaman](#)
[Kurt](#)
CC:
Date: 7/14/2014 10:06:30 AM
Subject: RE: UPDATE: Mandaree, ND Drinking Water

A couple of things. The EPA onscene coordinator from emergency response verified that the spill water never reached the bay. The intake is about 450 ft off shore, and the Bear Den Bay is quite large, so dilution also plays a part should any have reached it or for the gw/sw interface. I'm not sure they are doing anything as sophisticated as modeling that, though. We're also working with the plants up there to get some online conductivity meters on their raw water lines to help with these types of things in the future as they could see a spike in water quality coming into the plant.

Are we missing any opportunities here?

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(p) 303.312.6243 | (c) 303.903.8515 | (f) 877.876.9101

From: Hinaman, Kurt
Sent: Monday, July 14, 2014 7:40 AM
To: Bahrman, Sarah
Subject: RE: UPDATE: Mandaree, ND Drinking Water

So is the brine now a gw tracer and it can be used to get a modeled age of gw transport down the wash towards the reservoir? Or are the intakes just in a right place or is dilution is the solution?

Just wondering.

No need to take time to reply.

Kurt Hinaman, PG WY3507
SEE
USEPA Drinking Water Unit A
1595 Wynkoop Street (8P-W-DW)
Denver, CO 80202

303-312-6600

<http://www2.epa.gov/region8-waterops/>

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Sent: Friday, July 11, 2014 3:26 PM
To: R8 Drinking Water
Cc: Sorum, Jack (IHS/ABR/OEH)
Subject: UPDATE: Mandaree, ND Drinking Water

Hi all – please see below for the latest update. While the diesel range organics test was non-detect for petroleum products, they did get one peak (47 micrograms/L) that was for dillweed oil. The sample had to be submitted in a glass jar, and all they had on hand that worked was a pickle jar. J

Thanks to Mindy and Jack Sorum for all the help and support on this one this week!

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To: Mylott, Richard; Mohr, Mindy; McClain-Vanderpool, Lisa; McGrath, Shaun; Cantor, Howard; Card, Joan; Ostrander, David; Williams, Laura; Romero, David; Mitre, Alfreda; Phillips, Gregory; Hestmark, Martin; Thomas, Deb; Videtich, Callie; Hoskie, Sadie; Palomares, Art; Pardue-Welch, Kimberly; Merida, Mario
Subject: UPDATE: Mandaree, ND Drinking Water

I just spoke with Charles Cech at the ND DOH Lab, who provided some preliminary results from the raw water and treated drinking water samples. Total Dissolved Solids (calculated from conductivity), sodium, and total alkalinity were all within normal ranges, indicating no impact from the brine water to the drinking water supply. Diesel range organics tests were non-detect for petroleum products, again indicating no impact to the drinking water supply. The plant will continue operating normally. The operator and I discussed that there is no need to collect additional samples at this time. Please let me know if you have any questions.

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Subject: UPDATE: Mandaree, ND Drinking Water

Quick Update:

According to Pete Stevenson, the Army Corps of Engineers was out on the lake in the area of the intake to the Mandaree water plant and did not notice any visible sheen or other indicators that contamination had reached the water plant. As a precautionary measure, the water operators have collected samples from the area around the intake and from the treated water and will test for diesel range organics, sodium (as an indicator of total dissolved solids or brine), metals, and radiologicals. Samples are at the state lab in Bismarck and we should get some preliminary results later today.

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Subject: UPDATED AP: Saltwater leak alters water supply for 1 ND town

Fyi. Pete Stevenson is on-scene.

Estimated 1M gallons of saltwater leaks in ND bay

By Associated Press July 9 at 7:54 PM

MANDAREE, N.D. — Around 1 million gallons of saltwater spilled into a North Dakota bay, causing some environmental damage but sparing a nearby lake that provides drinking water for an American Indian reservation, company and tribe officials said Wednesday.

Three Affiliated Tribes Chairman Tex Hall told The Associated Press that an underground pipeline near Mandaree leaked about 24,000 barrels of brine into Bear Den Bay, a tributary to Lake Sakakawea. That Missouri River reservoir provides water to communities on the Fort Berthold Indian Reservation, occupied by the Mandan, Hidatsa and Arikara tribes in the heart of North Dakota's booming oil patch.

Saltwater is an unwanted byproduct of oil and natural gas drilling that can be 20 times saltier than ocean water. At least some damage to trees, bushes and grass was reported, but the extent wasn't immediately clear.

Miranda Jones, vice president of environmental safety and regulatory at Houston-based Crestwood Midstream Services Inc., whose subsidiary Aero Pipeline LLC owns the pipeline, said the leak likely started over the weekend but wasn't discovered until Tuesday. The pipeline is not equipped with a system that sends an alert when there's a leak, she said.

"This is something that no company wants on their record, and we are working diligently to clean it up," Jones said.

Tribal leaders switched to an alternative source of water Wednesday but were again tapping Lake Sakakawea after concluding the contamination was limited to the bay, Hall said.

An investigator with the federal Environmental Protection Agency arrived Wednesday at the site.

Kris Roberts, an environmental geologist with the North Dakota Health Department, said damage from the toxic spill could be seen Wednesday.

"We've got dead trees, dead grasses, dead bushes, dying bushes," Roberts said.

Karolin Rockvoy, a McKenzine County Emergency manager, said the spill appeared to have gone undetected for some time.

"Looking at vegetation, it didn't happen yesterday," she said. "I can guarantee you that."

The number of saltwater spills in North Dakota has grown with the state's soaring oil production.

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In 2006, a broken oil pipeline belched more than a million gallons of saltwater into a northwestern North Dakota creek, aquifer and pond. The cleanup efforts are ongoing at that site, which has been called the worst environmental disaster in state history.

The ruptured pipeline allowed saltwater to spew unnoticed for weeks into a tributary of the Yellowstone River near Alexander and caused a massive die-off of fish, turtles and plants.

That spill came during the infancy of North Dakota's oil boom. Now, a network of saltwater pipelines extends to hundreds of disposal wells in western North Dakota, where the brine is pumped underground for permanent storage.

Proposed legislation to mandate flow meters and cutoff switches on such lines was overwhelmingly rejected last year in the Legislature.

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Subject: AP: Saltwater leak alters water supply for 1 ND town

Fyi.

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MANDAREE, N.D. — Tribal leaders switched to an alternative source of water Wednesday for one town on an American Indian reservation in North Dakota following a substantial leak from a saltwater pipeline.

Kris Roberts, an environmental geologist with the North Dakota Health Department, said the spill was reported Tuesday but officials did not have any information on volumes or if the brine had reached Bear Den Bay, a tributary to Lake Sakakawea. The lake, a reservoir of the Missouri River, provides drinking water to several communities on the Fort Berthold Indian Reservation, occupied by the Mandan, Hidatsa and Arikara tribes in the heart of

North Dakota's booming oil patch.

Saltwater is an unwanted byproduct of oil and natural gas drilling that can be 20 times saltier than ocean water.

Three Affiliated Tribes Chairman Tex Hall said in a statement that "there are no specific concerns over the water safety" but that tribal officials closed the water intake to Mandaree as a precaution without elaborating on what steps were taken. Hall said the briny water did not appear to have reached Lake Sakakawea.

Houston-based Crestwood Midstream Services Inc., owner of the pipeline, said in a statement Wednesday that the spill was contained and cleanup was underway. The company said it was investigating the cause of the leak but would not comment beyond its statement.

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From: ["Hinaman, Kurt" <Ku>](#)
To: [Bahrman](#)
[Sarah](#)
CC:
Date: 7/14/2014 9:14:14 AM
Subject: RE: UPDATE: Mandaree, ND Drinking Water

I'm not sure if we are missing anything. Some USGS researcher with research funds might be missing an opportunity. Some folks made careers in studying an oil spill at Bemidji (<http://mn.water.usgs.gov/projects/bemidji/>).

I don't know the structure of the EPA well enough to know if anyone in EPA research would want to study this spill or to team up with USGS to study it.

To answer your question- -yes, someone is missing an opportunity- -question is if it is EPA, USGS, state universities, tribal consortium, etc.

Kurt Hinaman, PG WY3507
SEE
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<http://www2.epa.gov/region8-waterops/>

From: Bahrman, Sarah
Sent: Monday, July 14, 2014 10:07 AM
To: Hinaman, Kurt
Subject: RE: UPDATE: Mandaree, ND Drinking Water

A couple of things. The EPA onscene coordinator from emergency response verified that the spill water never reached the bay. The intake is about 450 ft off shore, and the Bear Den Bay is quite large, so dilution also plays a part should any have reached it or for the gw/sw interface. I'm not sure they are doing anything as sophisticated as modeling that, though. We're also working with the plants up there to get some online conductivity meters on their raw water lines to help with these types of things in the future as they could see a spike in water quality coming into the plant.

Are we missing any opportunities here?

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